### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-012463 Address: 333 Burma Road **Date Inspected:** 08-Mar-2010

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** Chen Xi. **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:** 

**Bridge No:** 34-0006 **Component:** OBG.

## **Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Shailesh Wadkar was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

### Bay 1:

This QA Inspector observed the following work in progress:

Flux Cored Arc Welding (FCAW) of OBG component – Traveler Rail; weld joint 20TR1-017 – 003. Welder is identified as 219188. ZPMC Quality Control (QC) is identified as Yang Fu Zhi. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2231-TC-U5-1G.

FCAW of OBG component – Traveler Rail; weld joint 20TR2-025 – 015. Welder is identified as 059450. ZPMC Quality Control (QC) is identified as Dong Yi Qun. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2231-TC-U5-1G.

FCAW of OBG component – Traveler Rail; weld joint 20TR2-017 – 011 & 015. Welder is identified as 215397. ZPMC Quality Control (QC) is identified as Liu Yang Hai. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2231-TC-U5-1G.

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Bay 2:

This QA Inspector observed the following work in progress:

Repair welding / build up of OBG component – Traveler Rail 10TR2-009 & 10TR1-028. Welder is identified as 045203. Welding process is identified as FCAW. ZPMC Quality Control (QC) is identified as Yang Qing Feng. The repair / build were carried out as per Critical Welding Repair (CWR) report no: B-CWR-1096 R-0. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-345-FCAW-1G (1F)-Repair. Build-up was required to be done on this part as it was found approx 15-20mm short of length as per what was required by drawing.

Repair welding / build up of OBG component – Traveler Rail 10TR1-008 & 11TR1-019. Welder is identified as 045209. Welding process is identified as FCAW. ZPMC Quality Control (QC) is identified as Yang Qing Feng. The repair / build were carried out as per Critical Welding Repair (CWR) report no: B-CWR-1096 R-0. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-345-FCAW-1G (1F)-Repair. Build-up was required to be done on this part as it was found approx 15-20mm short of length as per what was required by drawing.

Bay 8:

This QA Inspector observed the following work in progress:

FCAW of Floor Beam for Cross Beam (CB) 17, weld joint CB3001E-017-001, 002 & 003. Welder is identified as 054460. ZPMC Quality Control (QC) is identified as Zhao Cheng Jian. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2231-B-U2-FCM.

Submerged Arc welding (SAW) of Side Panel for Cross Beam (CB) 17, weld joint CB3001F-017-002. Welder is identified as 040831. ZPMC Quality Control (QC) is identified as Zhao Cheng Jian. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2231-B-U2-F.

Bay 15:

CB5:

Notification No: 005275.

This QA inspector performed Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an UT reports for this date. The member is identified as CB5. The weld designations reviewed are as follows:

1) CB202A-005 – 004, 006, 016, 018, 001, 003, 013 & 015.

CB6:

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Notification No: 005275.

This QA inspector performed Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an UT reports for this date. The member is identified as CB5. The weld designations reviewed are as follows:

- 1) CB202G-009 043 & 053.
- 2) CB202G-010 043 & 053.
- 3) CB202G-011 043 & 053.
- 4) CB202G-012 043 & 053.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

## **Summary of Conversations:**

Only general conversation was held between QA and QC concerning this project.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang; phone: 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Wadkar,Sailesh	Quality Assurance Inspector
Reviewed By:	Hall,Steven	QA Reviewer